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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,627	11/13/2003	Lawrence J. Karr	50037.0065USD3	2409
27488 7590 07/16/2007 MERCHANT & GOULD (MICROSOFT) P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER NGUYEN, DUC M	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 07/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/713,627	KARR ET AL.	
	Examiner	Art Unit	
	Duc M. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-24, 27-29 and 44-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-24, 27-29 and 44-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's response filed on 4/30/07. Claims **20-24, 27-29, 44-53** are now pending in the present application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **20, 23, 25-29, 44, 48-50, 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lorang et al** (US Pat No. **5,548,814**) in view of **Gaskill et al** (US **5,301,358**).

Regarding claim **44**, **Lorang** discloses a mobile device comprising:

- means for receive signals from a broadcast transmitter and from a local-cast transmitter as claimed (see Fig. 11, col. 12, lines 44-46, 64-66);
- means for transmitting information as claimed (see col. 7, lines 14-16).

However, **Lorang** fails to teach a variable tuning antenna for the mobile paging device. However, **Gaskill** teaches a variable tuning antenna for a mobile device (see Abstract, Fig. 1), wherein the antenna is periodically retuned during a listener interval, prior to the receipt of a packet of information (see col. 3, lines 1-20). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to

incorporate teaching of Gaskill to Lorang to provide a variable tuning antenna for the paging transceiver in Lorang as well, for improving data reception quality. Since the broadcast data in Lorang would implicitly be scheduled for transmission (see Lorang, col. 5, lines 17-22), Lorang in view of Gaskill, would teach a mobile transceiver that adjusts a variable tuning element configured to tune an antenna in response to a scheduled message reception as claimed, for improving data reception quality.

Regarding claim **48**, **Lorang** discloses the device is configured to transmit information in localcast mode (see col. 12, lines 44-46, 64-66).

Regarding claim **49**, **Lorang** discloses the device is configured to transmit information to another mobile over a localcast link (see col. 7, lines 14-16 and col. 12, lines 64-66).

Regarding claim **50**, **Lorang** discloses an antenna assembly, a transceiver and a microcomputer assembly as claimed (see Fig. 2 and col. 5, line 50 – col. 6, line 21).

Regarding claim **52**, it is clear that Larang would disclose a digital signal processor which is arranged to perform control, scheduling and post-processing task as claimed (see Fig. 10 and col. 11, line 42 – col. 12, line 15).

Regarding claim **52**, it is clear that Larang would disclose a transceiver as claimed (see Fig. 10).

Regarding claim **20**, **Lorang** discloses a mobile device, comprising:

- an antenna (see ref. 14 in Fig. 10);
- a real-time component comprising a system timing function (see Fig. 10 regarding frequency synthesizer and a crystal 334 which inherently comprises a

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- system timing signal), a real-time event dispatching (see col. 11, lines 42-46), and a digital radio (see RF front end regarding filters, mixers in Fig. 10);
- a digital processing circuit (see refs. 354, 356, 374 in Fig. 10);
 - a microcomputer assembly (see Figs. 2, 10, and col. 5, lines 50-60);
 - a random access memory (see Fig. 2 and col. 5, lines 60-col. 6, line 4);
 - a nonvolatile memory (see Fig. 2 and col. 5, lines 60-col. 6, line 4); and
 - a microprocessor-controlled user interface (see ref. 364 in Fig. 10).

Regarding claim **23**, **Lorang** discloses the device is configured to operate within a paging unit (see Abstract).

Regarding claim **25**, **Lorang** discloses the device is configured to receive content from local-area transmitter and from a broadcast transmitter (see Fig. 11, col. 12, lines 42-46, 64-66).

Regarding claim **26**, **Lorang** discloses the device comprises a transceiver (see Fig. 2).

Regarding claims **27-28**, **Lorang** discloses the device is configured to transmit and receive information from other mobile devices (see col. 7, lines 10-16).

Regarding claim **29**, **Lorang** discloses the device is configured to receive "local" information from other devices (see col. 7, lines 10-16).

3. Claims **21-22**, **24**, **45-47**, **51** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Lorang** in view of **Gaskill et al** and further in view of **Hoff** (US 5,168,271).

Regarding claim **51**, it is rejected for the same reason as set forth in claim 50 above. In addition, since **Lorang** suggests using standard paging FM architecture for communication, and since the standard paging FM architecture uses FM subcarrier signals for modulation, it is clear that **Lorang** would implicitly or obviously teach FM subcarrier signals as disclosed by **Hoff** (see Fig. 10, 11), whereas when communicating in locast mode, the frequency used would be locally-unused portion of an FM band in order to prevent interferences with FM subcarrier signals broadcasted in the broadcast mode.

Regarding claim **45**, it is rejected for the same reason as set forth in claim 51 above. In addition, **Hoff** discloses the transceiver is arranged to test a selected station for a main channel signal and a subcarrier signal as claimed (see col. 12, line 59 – col. 13, line 2), frequency searching.

Regarding claim **46**, it is rejected for the same reason as set forth in claim 51 above. In addition, it is clear that **Lorang** as modified would disclose the transceiver is arranged to capture a packet from the acquired subcarrier signal as claimed (see **Hoff**, Fig. 10).

Regarding claim **47**, it is rejected for the same reason as set forth in claim 51 above. In addition, since **Hoff** discloses a signal level detector, Hoff would disclose means for receiving a signal is further arranged to detect loss of a signal and signal quality as claimed (see col. 8, lines 1-8).

Regarding claim **21**, it is rejected for the same reason as set forth in claim 20 above. In addition, it would have been obvious to one skilled in the art at the time the

invention was made to configure the device to be worn on a person's wrist as disclosed by **Hoff** (see Fig. 1A), for preventing the displacing of the device.

Regarding claim **22**, it is rejected for the same reason as set forth in claim 20 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to configure the device to display current time as disclosed by **Hoff** (see col. 7, lines 30-39), for providing current time without the need of wearing another watch.

Regarding claim **24**, it is rejected for the same reason as set forth in claim 20 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to configure the device to operate within a cellular phone as disclosed by **Hoff** (see Fig. 10), for providing voice communication without the need of carrying another device.

Response to Arguments

4. Applicant's arguments with respect to claims 20-24, 27-29, 44-53 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See the attached PTO-892.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Matthew Anderson (Supervisor) whose telephone number is (571) 272-
4177.

Duc M. Nguyen, P.E.

A handwritten signature in black ink, appearing to read 'Duc M. Nguyen', with a stylized, flowing script.

July 2, 2007